

sector costs of the Y2K crisis reaches tens of billions of dollars in the United States alone.

Private sector costs are likely to be as high. The Gartner Group estimates that a mid-sized company with 8,000 computer programs will spend between \$3.6 million and \$4.2 million to repair "date challenged" software.

Who's left paying the bill? Surprise: first and foremost, the taxpayer. Then, either in the courts or by negotiation, the rest of the pain of solving the problem is likely to be shared by vendors, users and consumers. And the longer a company or an agency waits, the more it will cost. At the start of 1999, the cost will be three times that of starting today, because the supply of trained programmers able to fix the problem will not keep up with demand.

Once the alien in the movie made the Earth stand still, he convened the leaders of the world to a meeting in front of his space ship. The Earth's leaders told him they now believed in his powers and promised to destroy all the planet's nuclear weapons forthwith. But as soon as the alien left, they went back to their old habits of building more.

The real-life inhabitants of a planet that is so dependent on computers might take a lesson from that. Having let the technology experts put one past us this time, we shouldn't let them do it again.●

#### RECLAMATION RECYCLING AND WATER CONSERVATION ACT

● Mr. REID. Mr. President, I want to express my support for the Reclamation Recycling and Water Conservation Act, S. 1901, and its companion bill, H.R. 3660, that promotes the desalination and water reclamation projects in the arid West. I have long supported water reclamation and desalination as a means of conserving water which is a precious commodity in Nevada and other Western States.

In the past, with the senior Senator from Illinois [Senator SIMON], I have advocated legislation that would authorize desalination technology research on a national scale. Public investment in desalination technology is vital to the future of fresh water supply of the Nation. Nevertheless, I support this regional legislation because of the special water needs of NV, Utah, California, and New Mexico. I particularly note that this bill will provide for Clark County, NV, the fastest growing county in the Nation, to reduce its dependence on fresh water from the Colorado River and rely on desalination and wastewater recycling to meet the needs of the expanding community. This approach by Clark County and other Western communities to their water problems appears to be insightful recognition of the limited fresh water resources of the West.

This legislation is good common sense and I commend my colleague from Utah [Senator BENNETT], for his sponsorship. Not only does reclamation and reuse make good conservation policy but will also prove cost effective because it will cost less for municipalities to provide for recycling than to build new reservoirs and conduits. Consequently, there should not be any opposition to a bill that encourages con-

servation initiatives as well as fiscal responsibility of municipalities and Federal assistance.

I recommend this authorizing bill to my colleagues for unanimous consent so that the Secretary of the Interior can initiate such planning, designing, and construction of the projects that are itemized within the bill.●

#### NATIONAL PAYROLL WEEK

● Mr. WARNER. Mr. President, I rise today during National Payroll Week to recognize the contributions to American businesses and workers that are regularly made by payroll professionals. I am proud to participate in National Payroll Week by paying tribute to the professionals who pay the wages, report the earnings, and withhold the taxes of over 124 million American workers annually.

Payroll departments collectively withhold, report, and deposit nearly \$880 billion in taxes on behalf of the Federal Government alone. They spend more than \$15 billion each year just to comply with the huge web of Federal, State, and local wage and tax laws and an additional \$6 billion annually complying with Federal, State, and local, unemployment insurance laws.

More importantly, however, payroll professionals routinely protect American workers by helping to enforce fair labor practices by ensuring that workers receive overtime pay that they are due. Payroll departments also ensure through wage reporting that retirees' Social Security benefits accurately reflect their career earnings.

The work of payroll departments transcends office matters, though. Payroll professionals help identify deadbeat parents by filing new hire reports to child support enforcement agencies in more than two dozen States. This action helps identify noncustodial parents and ensures that child support payments can be withheld from a parent's pay, if appropriate. In fact, payroll departments collect from noncustodial parents more than half of all child support payments—more than \$8.1 billion over the last 10 years.

Mr. President, payroll professionals clearly play an essential role benefiting millions of Americans across our Nation. I am indeed glad to take this opportunity to express my appreciation and that of the people of Virginia for the fine work of America's payroll professionals.●

#### THE IMPORTANCE OF DIET IN CANCER PREVENTION

● Mr. HOLLINGS. Mr. President, very few cancer researchers have stressed the importance of diet in the prevention of cancer. Dr. Daniel Nixon of Charleston, SC is a pioneer in this field. I ask that there be printed in the RECORD an article from the *Post and Courier* profiling Dr. Nixon's professional accomplishments in preventative medicine.

The article follows:

DANIEL NIXON—HE FIGHTS CANCER WITH STRAWBERRIES

(By Dottie Ashley)

Some people dream of having a lavish home in the Bahamas or owning a private jet.

Dr. Daniel Nixon dreams of a super strawberry springing from the soil in South Carolina.

If Nixon's dream comes true, the results could prolong the lives of thousands of cancer patients so that they, too, may dream once more.

"South Carolina is a perfect place for cancer research because here we have both tumors of affluence and tumors of poverty, a large population of the very rich and of the very poor," say Nixon.

In the war against cancer, Nixon, associate director for Cancer Prevention and Control of the Hollings Cancer Center at the Medical University of South Carolina, is in charge of special weapons and tactics.

As the Folk Professor of Experimental Oncology at MUSC, Nixon has mounted his attack on cancer with an arsenal of cancer-preventing compounds that block the formation of cancer cells.

#### VOLUNTEERS ARE TESTED

A former associate director for the Cancer Prevention Research Program of the National Cancer Institute, Nixon has formed a networking arrangement between MUSC and other state agencies.

To conduct his research, which is funded largely by grants from the Washington State Raspberry Commission, Nixon has called on the services of the General Clinical Research Center at MUSC to monitor the concentrations of ellagic acid in the blood and urine of 12 healthy volunteers who are fed bowls of raspberries.

His research has been recognized by the Society for Nutritional Oncology Adjuvant Therapy, and Nixon will receive the Green Ribbon Award at a ceremony Sept. 18 in Philadelphia. The award is given by the society to recognize outstanding clinical research contributions to nutritional oncology in the areas of prevention, supportive nutrition and adjunctive therapy.

Nixon has seen both sides of the cancer-treatment coin.

"For 13 years, I administered chemotherapy to cancer patients, and finally I had to convince myself that we were not going to get rid of cancer by treatment only, that we had to have prevention as well," says Nixon, who also is the former head of medical oncology at Emory University's Winship Oncology clinic.

#### TREATED MISS LILLIAN

At Emory, Nixon was oncologist for Lillian Carter, mother of President Jimmy Carter.

"Dan Nixon is the most dedicated doctor I know. No matter how bad the news may be, he exudes hope," says Carter's sister-in-law, Sybil Carter, reached at her home in Plains, Ga. "He's Jimmy Carter's favorite physician."

Nixon recalls, "Miss Lillian was wonderful. She gave me a baseball that Fernando Valenzuela had signed and I still have it."

Prevention research is designed not only for those who do not have cancer, but also for those who have received, or are receiving treatment for cancer. Nixon believes that where cancer cells are already growing, in many cases, they may retreat when bombarded with raspberries and strawberries—more specifically, ellagic acid.

Raspberries and strawberries are extremely high in ellagic acid, a nutrient Nixon believes will prevent both the formation and advance of certain cancers, even in

people considered to be at high risk for the disease.

"Ellagic acid is an effective cancer prevention agent in animals. It stops the development of several types of cancer tumors, and there's reason to believe it can do the same for humans," says Nixon.

His research efforts include gathering information linking the connection between diet and cancer in the body by using a whole-body calorimeter, a \$80,000 machine that he had brought to MUSC which monitors fluctuations in whole-body temperature over a 90 to 120-minute period.

#### MEASURES HEAT LOSS

"This is the newest calorimeter in the United States. The calorimeter measures heat loss, which is calories expended. If a person is obese, he is calorically thrifty and suffers a greater cancer risk. The calorimeter helps us determine why that is."

Still retaining his soft-spoken Southern accent, despite time spent at Harvard and in Washington, D.C., Nixon has a calm demeanor that's reassuring to patients.

"The most important thing is to really take time and listen to your patients," he says. "They help you make the diagnosis and teach you so much about cancer treatment."

Born in Brunswick, Nixon moved with his family to Ware County and later to Bacon County, Ga., when his father, who was a forester, took a job in the Okefenokee Swamp.

After enrolling at the University of Georgia, Nixon double-majored in chemistry and zoology and went on to attend the Medical College of Georgia in Augusta.

He did his internship in Augusta, then served as a Clinical Fellow in Medicine (Oncology) at Massachusetts General Hospital and as a Research Fellow in The Huntington Laboratories at Harvard Medical School.

In spite of his gentle manner, Nixon is all business.

"I want people to realize that this work we are doing in science, not home economics," he says, as he points out that at work in his experiments are thousands of phytochemicals which have been manufactured by plants to protect themselves against insects and other predators.

#### FRUITS AND VEGETABLES

"These are not the usual vitamins and minerals that we are studying. We've known that fruits and vegetables are good for us. Now we want to know why."

As Nixon has investigated the connection between cancer and diet over the years, he has concluded that often the feeding of a normal American high-fat diet to a cancer patient may actually feed the tumor and encourage its growth.

"When I did a metabolic balance study, I found the cancer patients gained fat weight, not lean weight," he says. "People must learn to view eating food such as high-fiber cereal as the same as taking a drug to battle cancer. We need to learn how to feed our cancer patients without feeding their cancers."

For the past year, Nixon has worked in collaboration with scientific investigators at Clemson University who test the ellagic acid-laden blood which he sends them to find out what it does to tumor cells.

"We've found that the ellagic acid is readily absorbed and a lot of it gets into the blood stream. This is an effective delivery system to cells throughout the body."

"In animals it seems to protect genes against carcinogens, maybe even against tobacco carcinogens. Diets heavy in fats are the worst, as it appears that cancer thrives on fat calories."

He advises limiting fat intake to 20 to 25 percent of the total calories consumed daily.

#### WOMEN'S NUTRITION

Nixon's work with cancer prevention ranges from Emory's Winship clinic for Neoplastic Disease to working with the National Cancer Institute in Bethesda, Md., where he participated in a National Health Institute-funded Women's Intervention Nutrition Study designed to determine if reduced caloric intake contributes to a more favorable outcome in cancer therapy and reducing the chance of relapse.

After living in Bethesda for 2½ years, the Nixons returned to Atlanta, where Nixon served as vice president for cancer detection and treatment for the American Cancer Society.

In 1994, Nixon was asked to come to MUSC. He is enthusiastic concerning the support he has received from MUSC president Dr. James B. Edwards and Sen. Ernest F. Hollings.

"They have been wonderful about getting things going here in cancer prevention. For the past two years, we have been putting together a statewide network involving Clemson, the USC School of Public Health, oncologists in Spartanburg and Greenville as well as the S.C. Primary Research Consortium, based here at MUSC."

"We are working with a grant from the Centers for Disease Control which is funding volunteers in intervention control groups. People can be subjects in the groups or they can be counselors, whom we will train, to work with the cancer patients."

"We now know that about 70 percent of malignancies are either caused by tobacco or are in some way related to what we eat."

"If we can get rid of 70 percent of cancer, then we can turn our time and money to heart disease, diabetes, osteoporosis and toward antiaging research. There's no reason that humans can't live to be 120 years old."

#### WEIGHT LOSS

One of the cancer patients who volunteered in a clinical trial is Clare Howard, 64, who was the first patient to have her metabolic activity measured in the calorimeter.

Required to keep a record of what she has eaten each day, she has lost 26 pounds in the past year.

"I'm glad to take part in these cancer trials," she says. "And most of all, it's been wonderful to work with a doctor who is as compassionate as Dr. Nixon. I feel like he really cares."

Nixon's work is greatly admired by Dr. David Gangemi, director of Greenville Hospital System/Clemson University Biomedical Cooperative. "Dr. Nixon is a true star in the field of cancer prevention. And, going beyond that, this cooperation between Clemson and MUSC could change the economy of this state. If we are able to develop a strawberry with even more ellagic acid, then some farmers who grow tobacco could simply switch to strawberries."

"Also, this national grant we have will bring preventive medicine to the forefront, and this is greatly needed because there are some people in the medical community, such as some surgeons, who don't fully appreciate the preventive approach to cancer."

Dr. Dwight Camper of Clemson's Plant Pathology and Physiology Department, says of the MUSC partnership, "We are elated because this project gives us an opportunity to team the plant scientists with the medical professionals—the first time this has been done in South Carolina."

#### NAVAL RESERVE CAPTAIN

Nixon doesn't restrict his research to institutions of higher learning. About six years ago, Nixon, who holds the rank of captain in the Naval Reserve, worked with the Navy on a nutrition experiment that involved two destroyers which spent six months at sea.

"We worked with the chef on one of the destroyers to prepare food that followed the National Cancer Institute Dietary Guidelines and on the other ship they served regular Navy food," says Nixon.

"On the ship using the Dietary Guidelines, those who were obese lost weight. Also, the sailors seemed to like this food better," says Nixon.

Also, he has established a relationship with Johnson & Wales University to train future chefs to cook high-fiber, low-fat dishes.

"I tell them that chefs are the pharmacists of the future," says Nixon. "And I truly believe that."

"This year we have started to go into the schools systems to teach nutrition and we've opened a teaching center on St. Helena Island at the Beaufort-Jasper Comprehensive Health Agency clinic, near the Penn Center. There, we have teaching kitchens to demonstrate good nutrition because lots of diabetes and cancer can be found among the people there."

People can, in fact, alter their taste buds, Nixon says. "I grew up eating traditional, good Southern food, like fried chicken and vegetables cooked with fat. But I no longer enjoy fatty foods. Now, with all the no-fat and low-fat foods on the market, you don't really have to sacrifice enjoyment."

And to experience an impromptu dinner with the Nixons, indeed is proof.

It's a rainy summer evening and Nixon and his wife, Gayle, who is a cardiology research nurse, are in the middle of packing up their Sullivan's Island home to move into town for several months, while their new home is being built.

"We are donating this house to the United Methodist Relief Center, which is part of the Hibben Street United Methodist Church in Mount Pleasant," explains Mrs. Nixon, who points out after the house is moved, they plan to build their new home on the beachfront site.

For dinner, Mrs. Nixon serves boiled shrimp, along with carrots, grapes, blueberries, nonfat potato chips, as well as iced tea.

A careful shopper, she was glad when the National Labeling Education Act was implemented in 1993.

"When the amount of fat a food contains is listed on the bottle or box, they you know for sure whether you want to buy it," she says.

The Nixons met when she was a nurse in training at the Medical College of Georgia and he was in medical school.

"Gayle kind of pushed me into getting interested in nutrition," says Nixon. "She was also very interested in public health work and in the way that the food in people's diets had an impact on their well being."

This shared interest led to their book "The Cancer Recovery Eating Plan: The Right Foods to Help Fuel Your Recovery," published by Random House in 1994 and released in paperback last spring.

The Nixons say they don't miss the bustle of Atlanta.

"I was the 'stadium doc' at the home Atlanta Braves games, which meant if somebody got hit in the head with a foul ball that I would go and put an ice pack on it," Nixon says. "That was fun, but I don't really miss Atlanta at all."

Nixon feels he has found his dream job.

"Now I can really talk to patients; whereas, when I was doing chemotherapy, sometimes I would have as many as 60 patients a day, and I really had no time to talk." ●